

ABSTRACT

The present invention relates to a method and apparatus for dynamically positioning the objective lens in an optical disk drive to maintain focus despite loss of perpendicularity between the light beam and the information layer of the optical disk. Loss of perpendicularity may occur as a result of any number of factors, including irregularities in the manufacture of the disk, manufacturing tolerances and assembly of the disk drive components, bearing defect frequencies, shock and vibration. Failure to maintain perpendicularity may interfere with the ability of the optical pick up unit of the drive to accurately read and write. The tilt focus mechanism of the present invention utilizes a rotary actuator that positions the objective lens in three dimensions relative to the surface of the optical disk. In one embodiment, a first voice coil motor positions the actuator generally in two dimensions parallel to the surface of the disk and a second voice coil motor positions the objective lens generally along an arcuate path orthogonal to the surface of the disk.

JHS-A27

5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95